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## **Empirical Analysis of the Effects of Trade Openness on Economic Growth: An Evidence for South East European Countries**

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### **Abstract**

This paper intends to analyze the effects of openness to trade on economic growth of South East European (SEE) countries. Although these countries are at different stages of development and integration with European Union, there are not highlighted differences on trade openness. Trade policies of them have been oriented towards regional trade cooperation and also integrating into the global economy. The empirical analysis of this study consists on 16- year panel data of 10 SEE countries over the period 1996 to 2012. The system GMM is used as the most appropriate estimation method that addresses various econometric challenges, including endogeneity problems. The growth rate of the sample countries is modelled as dependent on trade openness and a set of control variables such as: initial level of income per capita, human capital, gross fix capital formation, FDI, labour force and a number of interaction variables with trade openness. The estimation results indicate that the positive effects of trade openness on economic growth are conditioned by the initial income per capita and other explanatory variables, otherwise there is not robust evidence between these two variables. Moreover, the trade openness is more beneficial to countries with higher level of initial income per capita, as well as trade openness favours countries with higher level of FDI and with higher gross fixed capital formation.

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**Keywords:** Economic growth; trade openness; SEE- countries; dynamic panel; system GMM

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## 1. Introduction

The theoretical literature of growth and international trade reveals that trade stimulates the long-term growth. Thus trade, as a key component of the development path has made an increasingly significant contribution to economic growth in the most of countries. But what is it for South-East European Countries (SEE countries)<sup>†</sup>? Is there a case of individual heterogeneity? Therefore, to answer to these questions, this paper surveys empirically the effects of trade openness on economic growth in the SEE region.

International trade is believed to be one of the several catalysts of productivity and growth and hence its contribution is contingent on its weight in economic activity. A core finding from the comprehensive literature shows that internationally active countries tend to be more productive than countries which only produce for the domestic market. Moreover, international trade promotes the efficient allocation of resources and can lead to higher growth that may be converted into greater factor accumulation, especially to those economies associated with technology diffusion and knowledge spillovers.

Although the theoretical literature explores dominant support for the gains of international trade on economic growth, its impact is still an open and a debatable issue among scholars. A range of empirical studies, some of which will be mentioned throughout this paper, have established a positive relationship between these two variables. For instance, Sachs and Warner (1995); Edwards, (1998); Frankel and Romer (1999) provide support for the growth enhancing effect of international trade. Sachs and Warner examine the impact of trade liberalization on the growth of 122 countries and they summarize that open countries exhibit higher growth rates than protectionist ones. Also, Frankel and Romer (1999) indicate that trade openness generated higher income levels in a cross section of 63 countries in the year 1985. Also, the study conducted by Dollar and Kraay (2004) points out to a significant contribution of trade openness on economic growth. They reveal that greater trade openness (which is quantified by trade volume) brings about higher growth rates. More recently, Freund and Bolaky (2008) using cross-country data from 126 countries, find that trade openness has a positive impact on per capita income. Their results reveal that trade leads to higher standards of living in flexible economies, but not in rigid economies. Calderon et al. (2004) find that openness has positive effects on growth in high income countries, but detect no growth effect due to openness for countries with a low level of per capita income. In addition, Chang et al. (2009), highlight that the positive relationship between growth and openness may be significantly improved if complementary policies are undertaken.

However, Rodriguez and Rodrik (2001) re-investigate critically the conclusion of previous cross-country studies that openness is associated with higher rates of growth. They argue that a variety of measures of openness used in previous studies are proxies for other policy or institutional variables and the results that openness enhances growth are not robust. On the other hand, the main distinctive characteristic of the recent papers on this issue lies in the use of the Generalized Method of Moments (GMM) estimator on panel datasets. In this way, endogeneity and invariant omitted variables bias could be tackled. Generally speaking, empirical studies which rely on within-country variation mostly report robust growth benefits from trade liberalization (Daumal & Ozyurt, 2011).

In this paper, we take a close look at the most persuasive empirical studies on growth theory written by Solow (1956) and the augmented version used by Mankiw et al. (1992). However, our empirical analysis has been extended taking into account the trade openness index and following (Calderon et al. 2004, Chang et al. 2009) specification by involving an interaction term between trade openness and initial income per capita that allows the growth effect of openness to vary with the level of income per capita of countries.

For the empirical analysis is used the system GMM procedure proposed by (Arellano and Bover 1995; Blundell and Bond 1998) as the most appropriate estimation method that addresses various econometric challenges, including endogeneity problems. Our results are generally in line with the most of prior studies on this issue, that openness enhances growth, but it is conditioned by initial income per capita and other explanatory variables. Looking only on the relationship between GDP per capita and openness to trade with pooled OLS estimation, we find no robust

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<sup>†</sup>The SEE Countries ( in the empirical analysis) include Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Serbia, Bulgaria, Romania, Greece, Serbia, Slovenia and Turkey. Countries like Slovenia, Greece and Turkey are considered in the sample because they are important trade partners of the other countries of this region, as well as to increase the sample 's size. Whereas Montenegro and Kosovo are excluded from the sample due to availability of the data for the period 1996-2012.

evidence, but including the initial income per capita as explanatory variable and avoiding the endogeneity problem, the openness to trade exerts significant positive effect.

The rest of the paper is structured as following. The second section is related to the general overview of economic and trade developments in SEE countries. The third one presents the methodology and data as well as the model specification. The fourth part explores the empirical results and findings. The last section summarizes our main findings and conclusions, and also gives some propositions for further research.

## 2. A general overview of economic growth and trade in SEE countries

The countries of SEE nowadays are at various stages of development and integration process with the European Union, but almost all of them have a clear European Union aspiration whereas some of these countries are already part of the EU (Greece, Bulgaria, Romania, Slovenia and Croatia).

Figure 1 provides a snapshot picture of the simple average income per capita, with data from 1996-2012 provided from World Bank. It is evident the region's heterogeneity, notably among countries that are members of EU (except Bulgaria) and non EU member states.

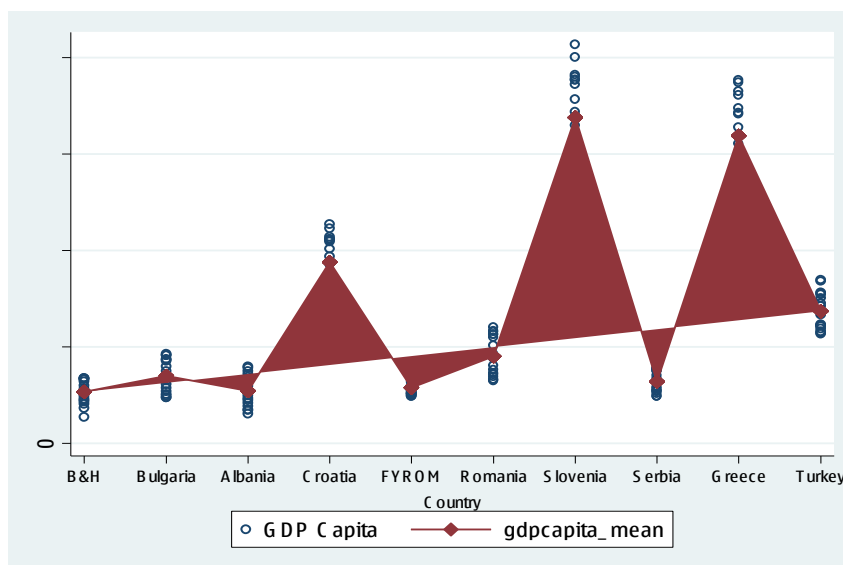


Fig 1. Mean of real GDP per capita (simple average 1996-2012)

Source: Author's calculation

In the first decade of the new century, SEE countries have been focused to undertake measures towards reforms that lead to improvements of trade liberalization process<sup>‡</sup>, especially Western Balkan countries have made considerable progress in their integration into the European and global economy, as well as in strengthening their mutual regional trade connections<sup>§</sup>. However, these countries have been characterized with a relatively low level of trade to world markets. The Western Balkan countries have recently engaged in a regional integration process, through the establishment of free trade agreements between themselves and with the European Union (EU). The International Institutions have provided assistance to the most of South East European countries (especially Western Balkans), to enhance trade collaboration within them and to form a well basis for a sustainable economic growth.

<sup>‡</sup> In contrast to their northern neighbors, the SEECS did little during the 1990s to foster regional trade integration. Unsurprisingly, their export performance throughout the decade was extremely disappointing.

<sup>§</sup> SEE stability pact of 2005. Part of the Stabilization and Association process is the establishment of a free trade area among SEE countries, this process aims to create a regional free trade area, which is also well integrated financially, politically and institutionally.

Observing to Figure 2 below, the openness index, measured as a ratio of the value of trade flows (exports plus imports) with the nominal GDP, shows a tendency of increase for the most of SEE countries starting from year 2002 (for instance, Albania, FYR of Macedonia, Serbia and Slovenia), whereas the downs in 2009 can be noticed in almost all countries due to effects of global financial crisis. In the most of SEE countries considerable decline marked the export sector, but nevertheless also imports dropped significantly. After this year the trends started to increase moderately. Looking at the trend of trade openness index from 1996-2012, the most opened countries are Slovenia, Bulgaria, FYR of Macedonia and Bosnia and Herzegovina, but the distinction is that in Bosnia & Herzegovina and FYR of Macedonia the share of imports is much higher than exports, so the trade balances of these countries are continuously negative for all the period under consideration.

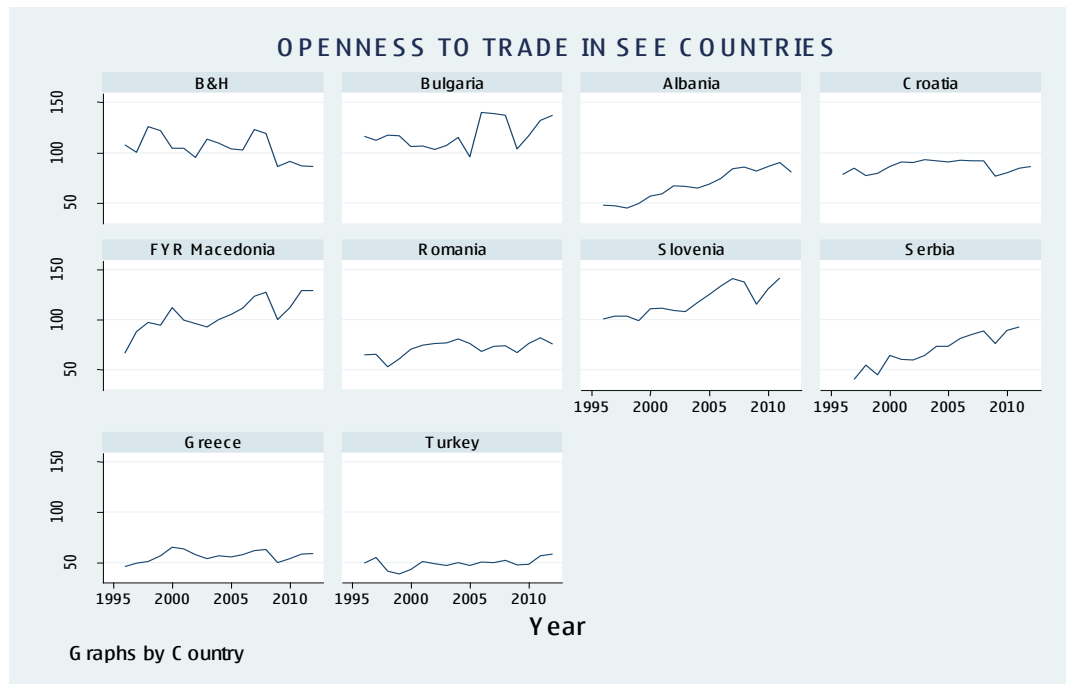


Fig 2. Openness to trade in SEE countries

Source: World Bank, World Development Indicators

### 3. Methodology and Data

The empirical analysis of this study consists on System Generalized Method of Moments (GMM) estimator developed for dynamic models. Also, several models are conducted such as: Pooled Ordinary Least Squares (OLS), fixed effects and first differenced GMM, exclusively for the comparison purpose of the empirical results. For a comprehensive analysis of the effects of trade on economic growth were performed a series of models by adding or excluding explanatory variables. This allows to the researchers to decide for the most consistent and efficient model on this phenomenon, as well as for the proposed countries.

The dataset of this study covers a slightly unbalanced panel of 10 South East European (SEE) countries (five of which are member states of EU) over the period 1996-2012. The data availability for this set of countries limit the sample to start in 1996 and end in 2012. The data are provided mainly from the database of World Development Indicators – World Bank.

### 3.1. Specification of the growth model

Considering the conventional growth literature, we specify a growth equation introduced first by Solow (1956) and also the augmented version used by Mankiw et al. (1992). Economic growth (apprehended by the real GDP per capita) and the determinants of growth which vary across time and countries are represented in the equation below:

$$\ln Y_{it} = \alpha_0 + \delta \ln Y_{it-1} + \beta' \ln X_{it} + \lambda_i + \mu_t + \varepsilon_{it} \dots \dots \dots (1)$$

where  $Y_{it}$  denotes the logarithm of real GDP per capita (2005 constant \$US) of country  $i$  at year  $t$ ;  $Y_{it-1}$  is the initial GDP per capita;  $X_{it}$  is a vector of explanatory variables that vary across time and space (determinants of growth), defined according to the augmented Solow growth model;  $\lambda_i$  is the unobserved country specific effect;  $\mu_t$  is the unobserved time specific effect which captures global shocks; and  $\varepsilon_{it}$  is the error term.

The econometric model that assesses the effects of trade openness on economic growth for SEE countries would be specified as in the following:

$$\ln Y_{it} = \beta_0 + \beta_1 Y_{it-1} + \beta_2 \ln Openness_{it} + \beta_3 (\ln Openness_{it} * \ln Y_{it-1}) + \beta_4 \ln Human\ Capital + \beta_5 \ln GFCF + \beta_6 \ln Active\ Population + \beta_7 \ln FDI + \lambda_i + \mu_t + \varepsilon_{it}$$

The initial stock of capital is proxied by the logarithm of GDP per capita of country  $i$  at the beginning of each period ( $Y_{it-1}$ , initial GDP per capita). Under the hypothesis of conditional convergence the coefficient of this variable is predicted to be negative and significant (Solow, 1956; Barro & Martin, 1995). Assuming all other things constant, countries with lower GDP per capita are predicted to grow at a faster rate than the countries with higher GDP per capita<sup>\*\*</sup>.

Trade openness corresponds by the ratio of the total value of external trade (exports plus imports) to GDP. A number of existing empirical literature support a positive link between trade openness and growth (e.g. Dollar, 1992; Dollar and Kray, 2002; Sachs and Warner, 1995), however the sign of relationship between them is ambiguous as some studies find no robust evidence (e.g. Rodriguez, F. 2007).

In the model is included an interaction term between openness and country's initial income level to capture the effect of trade openness on economic growth given the level of development of the countries. It determines whether economic growth is conditioned by the initial income level of the economy due to trade openness and which countries benefit more from trade openness.

The secondary school enrolment rate is used as a proxy for human capital<sup>††</sup>. The literature broadly suggests a positive sign of this variable and economic growth (Barro, 1991; Levine and Renelt, 1992; Mankiw et al. 1992). However, Bils & Klenow (2000) argue that strong empirical relation between growth and school enrolment rate is spurious since it is more likely that both variables are correlated with other omitted variables.

Physical capital accumulation is an important determinant of growth (Solow, 1956; Romer, 1986). Firms can accumulate know-how through capital accumulation, thus some investments can produce growing returns and promote economic growth. Physical capital accumulation in this analysis is proxied by the share of gross fixed capital formation (GFCF) in GDP. Based on the existing literature, the coefficient of this variable is predicted to be positive.

Labour force participation rate or economically active population is another growth determinant that is used also in this analysis. We expect a priori for this variable to exert a negative effect on economic growth. Despite this, Hotchkiss, J.L. (2009) confirms that the size of the labour force can profoundly affect the potential of economic growth.

Foreign direct investment (FDI) is included in the model to capture the effect of external sources of investment

<sup>\*\*</sup> This is based on the law of diminishing marginal returns on capital.

<sup>††</sup> Some authors address criticisms on this proxy of human capital. An important issue concerning school enrollment rates is that this variable is sometimes used as a proxy for level of human capital, sometimes as a measure of change in human capital. However, the rate of secondary school enrollment is widely used in the literature referring to the human capital.

on growth. The expected relation may be positive or negative. Carkovic and Levine (2005) use the system GMM estimator to re-examine the relationship between FDI and growth, but find no robust evidence supporting the conclusion that FDI affects positively growth.

### 3.2 The estimation methodology and the system GMM

In the panel techniques of estimation, the fixed effects method is the common estimator that includes the country-specific (time invariant) effect and time-specific (individual-invariant) effect. However, estimating the static models or within group estimations and also, the dynamic panel data models by OLS will potentially lead to biased results. These models are beset by well-known problems, particularly in the growth regression models. First, the explanatory variables are potentially endogenous and may be measured with errors, especially when the time span is small (Nickell, 1981). Second, omitted variables can bias the estimation.

To tackle these issues Arellano & Bond (1991) suggest a dynamic panel data model using the generalized method of moments (GMM) that includes the lagged endogenous variable as an explanatory variable (see Equation (1) in the previous section). In Arellano and Bond's estimation strategy it is necessary to first-difference equation (1), in order to eliminate the country-specific effect:

$$\begin{aligned} \ln Y_{i,t} - \ln Y_{i,t-1} = & \alpha_0 + \delta(\ln Y_{i,t-1} - \ln Y_{i,t-2}) + \beta'(\ln X_{i,t} - \ln X_{i,t-1}) + \\ & + (\lambda_t - \lambda_{t-1}) + (\varepsilon_{it} - \varepsilon_{i,t-1}) \end{aligned}$$

Since the error term  $\varepsilon_{it} - \varepsilon_{i,t-1}$  is correlated with the new lagged dependent variable  $\ln Y_{i,t} - \ln Y_{i,t-1}$ , the within estimator is also biased. Blundell and Bond (1998) indicate that the first-differenced GMM estimators are likely to perform poorly when the time series are persistent and the number of time periods is small. This is because lagged levels of the series provide only weak instruments for the differenced equations. Another weakness of using the difference estimator is that the process of differencing to remove the country specific effect also eliminates information on the cross-country variation in levels.

For this reason, the study follows an instrumental variable approach by finding adequate instruments that are correlated with the endogenous explanatory variables but are uncorrelated with the dependent variable. Thus, we employ the system GMM proposed by Arellano and Bover (1995), Blundell and Bond (1998), Bond et al. (2001), introduced also by Roodman (2006), as more appropriate approach<sup>\*\*</sup>. This approach is widely used and obviates the above problems, particularly for empirical growth regressions. The system GMM estimator uses moment conditions based on the level equations together with the usual Arellano and Bond (1998) type orthogonality conditions. The main advantage of this estimator is that it doesn't require any external instrument to deal with endogeneity, but it uses as instruments the lagged values and differences between two time periods of the endogenous explanatory variables.

The consistency of the system GMM estimator relies on two hypotheses. First, the set of instrumental variables must be valid, i.e. uncorrelated with the error terms. This hypothesis is tested using Sargan and Hansen test of over identifying restrictions. Second, the absence of second order autocorrelation (AR2) in residuals must be verified, while a negative first order autocorrelation (AR1) may be detected. This hypothesis is tested using Arellano-Bond tests for AR1 and AR2.

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<sup>\*\*</sup> See for e.g. Caselli et al. (1996); Dollar & Kraay, (2004) argue that the system GMM estimator is the most suitable way to handle the problems of estimating growth models

## 4. Empirical results

### 4.1 The effects of trade on economic growth

In this section, we estimate the empirical models specified in equation (1) with different estimation techniques, although the preferred estimator is the system GMM. The study examines whether trade openness can be considered as a determinant of economic growth for SEE countries or not. As a benchmarking, we focus on the augmented Solow and Mankiw et al. (1992) model that explains differences in GDP per capita growth across countries and time with the initial level of GDP per capita, human capital, gross fixed capital formation and active population, as additional variables are trade openness that is in the focus of the present study, and FDI.

In (Table 1) below are displayed the regression results of pooled OLS, fixed effects, random effects, Arellano and Bond (1991) differenced GMM, and System GMM.

**Table 1.** Regression results of different estimation techniques

Variables	Pooled OLS	Fixed effects	Differenced GMM	System GMM
$\ln GDP_{it-1}$	0.128*** (0.000)	0.708*** (0.000)	0.588*** (0.000)	0.935*** (0.000)
$\ln Openness$	0.092 (0.485)	0.063** (0.024)	0.068** (0.011)	0.136** (0.041)
$\ln(Human\ capital)$	0.018** (0.045)	0.094*** (0.000)	0.839 (0.737)	0.024 (0.120)
$\ln(GFCF)$	0.070*** (0.000)	0.163*** (0.000)	0.152*** (0.000)	0.077** (0.049)
$\ln(Active\ population)$	-0.022 (0.524)	-0.179** (0.030)	-0.053 (0.536)	-0.017 (0.343)
$\ln(FDI)$	0.0003 (0.345)	0.0017* (0.094)	0.008 (0.620)	0.0009 (0.184)
m2			0.731	0.743
Hansen test			0.222	0.191
Number of observation	131	131	117	119
Number of countries	10	10	10	9
Number of instruments			23	11

Notes: The dependent variable is log of GDP per capita. P-values are in parentheses. For the specification tests, p-values are reported. Time dummies are included in all regressions (not reported). \*, \*\* and \*\*\* indicate that the coefficients are significant at the 10%, 5% and 1% level of significance, respectively. Column 3 reports the results of two-step Arellano-Bond (1991) difference GMM. Column 4 shows the results of two-step Blundell and Bond(1998) system GMM estimator with Windmeijer finite-sample correction.

Unlike the expected negative sign according to the Solow growth model, the coefficients on the initial GDP per capita variable in all models are found to be positive and statistically significant at the 1% level, providing strong evidence of conditional evidence. In the pooled OLS the coefficient is greater than one<sup>§§</sup>, whereas in other regression results the coefficients of this variable are less than one. This means that poorer South East European (SEE) countries tend to grow faster than richer ones. However, it should be considered that these countries might converge towards different levels of per capita GDP, since in our model, we control for structural differences between countries through a set of explanatory variables.

The coefficients of trade openness are found to be positive and statistically significant at 5% level of significance in fixed effects model, differenced GMM and system GMM models but it doesn't show robust evidence in pooled OLS, so the sign of relationship is positive but not significant. On the other hand the coefficient of correlation between the logarithm of GDP per capita and logarithm of openness to trade with pooled OLS estimation is negative and not significant. This shows that trade openness doesn't exert significant effect on growth of SEE countries (see

<sup>§§</sup> In dynamic panel data models, due to potentially endogenous estimators the results of the OLS estimation may be biased upwards.



Figure 3 below), but including other explanatory variables into the model as well as the initial GDP per capita, the coefficient of trade openness become positive and statistically significant. This means that the positive effects of trade on growth are conditioned by other factors, such as the human capital, physical capital, FDI and the initial income per capita. Moreover, the largest number of countries included in our sample of analysis belonging to developing economies (excluding developed ones) and their consumption cannot be met solely by domestic production, thus their orientation towards imports represents the apparent position (prevailing) compared with exports. As a result, trading volumes of some of sample countries mark a continuous increase of imports versus exports and therefore in continuance result with negative trade balances.

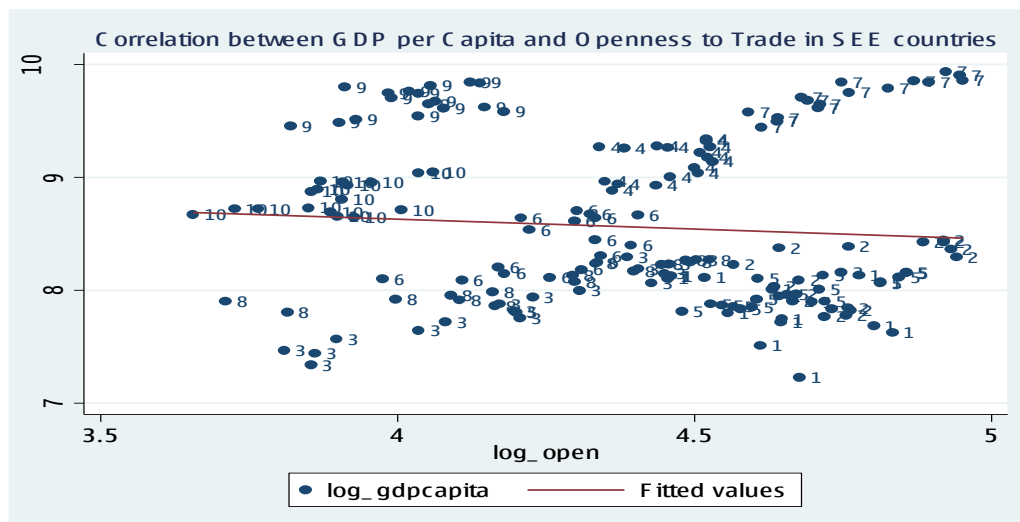


Fig 3. The relationship between GDP per capita and trade openness of SEE countries

Author's calculation

The coefficient of human capital estimated by OLS is found to be positive and statistically significant at 5% level as well as 1% level of significance in fixed effects model. Despite this using differenced GMM and system GMM the coefficients of this variable lose statistical significance probably because these within country models discard information on cross-country variations in education levels.

The coefficients of gross fixed capital formation (GFCF) are positively related with GDP and statistically significant at 5% level in system GMM and 1% level in other regression models. Regarding the active population the coefficients of this variable in all models are found to be negative but statistically significant only in fixed effects model at 5% level of significance. The coefficient of FDI turns out to be significantly positive in 10% level using fixed effects and statistically insignificant in other models.

The validity of instruments for first-differenced and system GMM estimator can be evaluated by a set of specification test (Arellano and Bond, 1991). The application of the Hansen test of over-identifying restrictions provides no ground to reject the validity of the instruments. Two tests m1 and m2 show a first order serial correlation in the first differenced equation, but detect no evidence of second order serial correlation

In order to test the sensitivity of the results to the conditioning variables included, Table 2 gives the results of the models estimated by system GMM with different specifications including also interaction terms.

**Table 2.** Results of system GMM for different specifications

Variables	System GMM Model 1	System GMM Model 2	System GMM Model 3
$\ln GDP_{it-1}$	0.692*** (0.000)	1.007*** (0.000)	0.903*** (0.000)
$\ln Openness$	-0.441 (0.502)	0.666** (0.036)	0.561** (0.032)
$\ln(Human\ capital)$	0.122**	0.053	0.076



	(0.050)	(0.182)	(0.192)
<i>ln(GFCF)</i>	0.078**	0.095**	0.057***
	(0.036)	(0.051)	(0.001)
<i>ln(Active population)</i>	----	-0.07	----
		(0.168)	
<i>ln(FDI)</i>	----	----	-0.009
			(0.127)
<i>ln openness*lnGDP<sub>it-1</sub></i>	0.169**	----	----
	(0.042)		
<i>ln (GFCF)*ln (openness)</i>		0.195***	----
		(0.001)	
<i>ln (FDI)*ln (openness)</i>			0.029*
			(0.068)
<i>Constant</i>	6.49	3.14	2.172
	(0.149)	(0.116)	(0.133)
Number of observation	119	119	119
Time dummies	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Number of instruments	9	11	11
Sargan test, p-level	0.91	0.88	0.91
AR (1) test, p-level	0.01	0.05	0.00
AR (2) test, p-level	0.21	0.32	0.11

Notes: The dependent variable is log of GDP per capita. P-values are in parentheses. For the specification tests, p-values are reported. \*, \*\* and \*\*\* indicate that the coefficients are significant at the 10%, 5% and 1% level of significance, respectively.

The first column reports the regression results when an interaction term between initial GDP per capita and trade openness is included. In this specification the trade openness has negative sign but not significant. However the sign of the interaction variable is positive and statistically significant. The significance of this coefficient reveals that the growth effect of trade openness is conditional to the level of economic development of SEE countries. As a result, the positive effects of trade openness decline as the level of per capita income decreases. More precisely, trade openness favours countries with higher initial income per capita, from this set of countries. This result is in line with Calderon et al. (2004). Irwin and Tervio (2000) claim: "The positive correlation between trade and income could mean that countries with higher incomes engage in more trade rather than countries with more trade having more income". It can be noticed that in the second and third model when the interaction term is not included, the coefficient of trade openness is positive and statistically significant at 5% level of significance. The initial GDP per capita variable is found to be positive and statistically significant at the 1% level in all three models. The coefficient of this variable represent the conditional convergence, so for calculating the speed of convergence we chose the model 1 of table 2 as it has the most appropriate number of instruments for this analysis. Consequently, the value of the coefficient is 0.692, which highlights that the speed of convergence equals at about 30%.

Human capital is with positive sign in all models, but it results significant only in the first specification, at the level of significance of 10%. The coefficient of gross fixed capital formation results significant in all models and is positively related with the GDP per capita growth. Also the interaction term between this variable and trade openness in the second model is positive and statistically significant, thus this reveals that trade openness favours well endowed countries with physical capital. The labour force participation rate in the second model has negative coefficient but statistically insignificant. Also FDI doesn't show statistical significance in the third model, but it becomes significant interacted with trade openness. The coefficient of the interaction term between FDI and trade openness is positive that means that countries with higher FDI benefit more from international trade rather than countries with lower FDI.

## 5. Conclusion

The objective of this paper was to survey the effects of trade openness on GDP per capita growth in South East European countries. To reach that were performed several specifications of trade openness on per capita income growth. It was also investigated for the regional imbalances of the aforementioned countries.

Using system GMM technique which reduces bias in dynamic panel estimation and use internal instruments for the endogenous explanatory variables, we find positive and statistically significant growth effect of trade openness.

Econometric results also show that in SEE countries the growth effect of trade openness is conditioned by the level of initial income per capita and other explanatory variables used in the model. That is to say, trade openness encourages the growth of countries with higher GDP per capita (or richer countries). All else equal, empirical results also indicate that from trade openness is likely to benefit countries with higher gross fixed capital formation and those with higher FDI.

Considering that this is the first attempt of establishing a causal linkage between trade and GDP per capita growth for this set of countries, the findings are crucial for the current discourse for this region as they underpin the importance of regional and international trade related development.

In spite of the limited size of the sample, the system GMM model performs well for this analysis. However we contend that our study provide only a promising step towards developing a more comprehensive empirical research which will capture more variables typical for this issue and also by extending the size of the sample.

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